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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,533	05/07/2007	Sebastian Weitbruch	PD030131	3179
24498 7590 11/24/2010 Robert D. Shedd, Patent Operations THOMSON Licensing LLC P.O. Box 5312 Princeton, NJ 08543-5312				
EXAMINER				
XAVIER, ANTONIO J				
ART UNIT		PAPER NUMBER		
2629				
MAIL DATE		DELIVERY MODE		
11/24/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/583,533

**Applicant(s)**

WEITBRUCH ET AL.

**Examiner**

ANTONIO XAVIER

**Art Unit**

2629

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 5,7-12,15,18,20,22-27 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 4,6,13,14,19,21,28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings were received on September 17, 2010. These drawings are acceptable.

### *Response to Arguments*

2. Applicant's arguments filed September 17, 2010 (hereinafter "Remarks") have been fully considered but they are not persuasive.

On pages 9-11 of the Remarks, Applicant argues the terms "sustain frequency" and "sustain period" have specific meanings to distinguish the claims from the Kuriyama reference. Examiner is not persuaded.

Specifically, Applicant argues "the term 'sustain frequency' as used in the present application is related to the frequency of the sustain pulse, which means the number of sustain pulses in a certain time unit as 1 second for Hz or 0.001 second for kHz during the occurrence of sustain pulses" (emphasis added). However, Applicant then admits "the term 'sustaining frequency' as used in Kuriyama et al. is related to the number of sustain pulses in a frame or in a sub-frame" (emphasis added). Examiner is not persuaded by Applicant's argument and notes **a frame or sub-frame is a certain time unit**. Examiner notes p. 14, lines 21-23 of the specification as filed teach "it is

necessary to modify the number of sustain pulses of each subfield in accordance with the selected sustain frequencies in order to have enough time to perform all the sustain pulses" (emphasis added).

Furthermore, Examiner notes Applicant appears to be arguing additional limitations that are not claimed in order to distinguish the claims from the Kuriyama reference.

First, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **number of sustain pulses in a certain time expressed in Hz or KHz**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Second, *in the interest of compact prosecution*, Examiner notes that merely expressing a certain time in Hz or KHz does not appear to be a novel concept. Kuriyama inherently teaches a time unit capable of being expressed in Hz or KHz and it would be obvious to one of ordinary skill in the art to modify the descriptive label used to describe the sustain frequency in reference to Hz or KHz. Examiner notes Applicant appears to be arguing terms used to identify a time unit (i.e., a descriptive label) rather than specific ranges within a specific time unit. Examiner notes the sustain frequency of Kuriyama can be expressed with reference to any desired time unit by simply converting the number of times an event occurs (i.e., sustain pulses per frame/sub-frame) to the

desired time unit in question (i.e., substituting the time unit of 'seconds' for the frame/sub-frame). Examiner stresses the difference between merely referring to a time unit in terms of Hz or KHz and claiming a specific Hz or KHz range for the sustain frequency.

3. Applicant's remaining arguments have been fully considered but they are not persuasive. Furthermore, the common knowledge or well-known in the art statements presented in the prior office action are now taken to be admitted prior art because Applicant either failed to traverse the Examiner's assertion of official notice or the traversal was inadequate.

Examiner thanks Applicant for recognizing the common art and advancing the focus of the prosecution with respect to Applicant's inventive concept.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuriyama et al. (U.S. Pat. No.: 6,100,859).

With respect to Claim 1, Kuriyama teaches a method for processing data of a picture to be displayed on a display panel with persistent luminous elements during a frame comprising a plurality of subfields, each subfield comprising an addressing phase during which the luminous elements of the panel are activated or not in accordance with the picture data and a sustain phase during which the activated luminous elements are illuminated by sustain pulses, wherein it comprises the following steps (Figs. 1-34 teach various plasma displays with addressing and sustaining subfields):

computing, for each subfield, the amount of activated luminous elements in each line of luminous elements of the display panel, called line load (Col. 21, line 20-Col. 28, line 57 teach various embodiments to adjust a display based on subfield line loads. Examiner notes Col. 22, line 11-Col. 23, line 27 teach a specific embodiment determining the display load luminance for each subfield),

calculating, for each subfield, the maximal line load difference between two consecutive lines of the display panel (Col. 11, line 30-Col. 21, line 18 teach various embodiments to adjust a display based on a plurality of blocks including at least one line. Examiner notes Col. 11, lines 30-40, Col. 15, lines 51-55, Col. 16, line 1-Col. 17, line 17 teach block by block and line by line luminance compensation. Col. 22, line 63-Col. 23, line 27 and Col. 25, line 13-Col. 27, line 21 teach the use of the maximal difference in determining the sustain frequency) , and

selecting, for each subfield, a sustain frequency reduced in accordance with its maximal load difference in order to reduce line load effect (Col. 11, line 30-Col. 21, line 18 teach various embodiments to adjust a display based on a plurality of blocks including at least one line. Examiner notes Col. 11, lines 30-40, Col. 15, lines 51-55, Col. 16, line 1-Col. 17, line 17 teach a specific embodiment calculating the difference of line loads for each subfield. Col. 22, line 63-Col. 23, line 27 and Col. 25, line 13-Col. 27, line 21 teach the use of the maximal difference in determining the sustain frequency. Col. 14, lines 18-20, Col. 20, lines 12-24, Col. 25, lines 1-7 and Col. 26, lines 29-46 teach reducing the number of sustaining pulses to be applied).

However, Kuriyama fails to expressly teach all of the limitations in a single embodiment (emphasis added). It would have been obvious to one of ordinary skill in the art to apply the various known teachings of Kuriyama to adjust the sustain frequency based on line loads for blocks of lines and subfield loads because one of ordinary skill in the art would have recognized that applying the known techniques would have yielded predictable results and resulted in an improved system.

With respect to Claim 2, Kuriyama teaches the method according to Claim 1, discussed above. However, Kuriyama fails to expressly teach wherein the calculation of the maximal load difference is only carried out for lines whose load is greater than a minimal load (emphasis added).

Examiner takes official notice that performing an operation only after a condition has been met is well known in the art. Examiner notes this is commonly known as a

threshold. It would have been obvious to one of ordinary skill in the art to apply the known technique of checking a threshold to the display adjustment of Kuriyama such that the calculation of the maximal load difference is only carried out for lines whose load is greater than a minimal load because one of ordinary skill in the art would have recognized that applying the known techniques would have yielded predictable results and resulted in an improved system. Examiner further notes that selectively performing display adjustment for a maximal load differences over a specific threshold (i.e., minimal load) would conserve power and save processing time if an image does not need adjustment.

With respect to Claim 3, Kuriyama teaches the method according to Claim 2, discussed above. However, Kuriyama fails to expressly teach wherein the minimal load for a line is equal to 10% of the amount of luminous elements in a line of the display panel (emphasis added).

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to set the threshold for the minimal load to 10% of the amount of luminous elements in a line of the display panel because Applicant has not disclosed that setting the minimal load to 10% provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a threshold for the minimal load set to 10% because thresholds are well known in the art and the display adjustment of Kuriyama is capable of including any arbitrary threshold to



improve functionality and performance. Therefore, it would have been an obvious matter of design choice to set the threshold for the minimal load to 10% of the amount of luminous elements in a line of the display panel.

With respect to Claim 16, Kuriyama teaches a device for processing data of a picture to be displayed on a display panel with persistent luminous elements during a frame comprising a plurality of subfields, each subfield comprising an addressing phase during which the luminous elements of the panel are activated or not in accordance with the picture data and a sustain phase during which the activated luminous elements are illuminated by sustain pulses (Figs. 1-34 teach various plasma displays with addressing and sustaining subfields), wherein it comprises:

means for computing, for each subfield, the amount of activated luminous elements in each line of luminous elements of the display panel, called line load (Col. 21, line 20-Col. 28, line 57 teach various embodiments to adjust a display based on subfield line loads. Examiner notes Col. 22, line 11-Col. 23, line 27 teach a specific embodiment determining the display load luminance for each subfield), and for calculating, for each subfield, the maximal difference of line loads of two consecutive lines of the display panel (Col. 11, line 30-Col. 21, line 18 teach various embodiments to adjust a display based on a plurality of blocks including at least one line. Examiner notes Col. 11, lines 30-40, Col. 15, lines 51-55, Col. 16, line 1-Col. 17, line 17 teach a specific embodiment calculating the difference of line loads for each subfield. Examiner further notes the limitation "two consecutive lines" includes a block of two lines. Col. 22,

line 63-Col. 23, line 27 and Col. 25, line 13-Col. 27, line 21 teach the use of the maximal difference in determining the sustain frequency), and

means for selecting, for each subfield, a lower sustain frequency being reduced in accordance with its maximal load difference in order to reduce line load effect (Col. 11, line 30-Col. 21, line 18 teach various embodiments to adjust a display based on a plurality of blocks including at least one line. Examiner notes Col. 11, lines 30-40, Col. 15, lines 51-55, Col. 16, line 1-Col. 17, line 17 teach a specific embodiment calculating the difference of line loads for each subfield. Examiner further notes the limitation "two consecutive lines" includes a block of two lines. Col. 22, line 63-Col. 23, line 27 and Col. 25, line 13-Col. 27, line 21 teach the use of the maximal difference in determining the sustain frequency. Col. 14, lines 18-20, Col. 20, lines 12-24, Col. 25, lines 1-7 and Col. 26, lines 29-46 teach reducing the number of sustaining pulses to be applied).

However, Kuriyama fails to expressly teach all of the limitations in a single embodiment (emphasis added). It would have been obvious to one of ordinary skill in the art to apply the various known teachings of Kuriyama to adjust the sustain frequency based on line loads for blocks of lines and subfield loads because one of ordinary skill in the art would have recognized that applying the known techniques would have yielded predictable results and resulted in an improved system.

The further limitations of Claim 17 are rejected for substantially the same reasons as Claim 2, discussed above.

***Allowable Subject Matter***

6. Claims 4, 6, 13-14, 19, 21 and 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record teaches adjusting a plasma display to compensate for load effect but fails to specifically teach (1) adjusting based on maximal load difference of a current frame and a plurality of preceding frames (Claims 4 and 19); (2) measuring and adjusting in accordance with first and second average power levels (Claims 6 and 21); (3) rescaling the number of sustain pulses to redistribute sustain pulses proportional to the second number of sustain pulses (Claims 13 and 28); and (4) rescaling the number of sustain pulses in order of average power level needed (Claims 14 and 29) (enumeration added).

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTONIO XAVIER whose telephone number is 571-270-7688. The examiner can normally be reached on M-F 6:30am-12:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2629

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629